



Play Update @ CFO Council

September 20, 2018

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EXHIBIT 434.R

EXHIBIT 434.R-001

Play Financial Overview - Revenue & Profitability

	2016	2017	2018	Y/Y%	
in USD (\$M)	Actuals	Actuals	Outlook	'17	'18
Total Revenue	\$5,310	\$6,853	\$8,657	29%	26%
Total COS	\$1,824	\$2,073	\$2,379	14%	15%
Gross Profit	\$3,487	\$4,780	\$6,278	37%	31%
%	66%	70%	73%	4 ppt	3 ppt
Total OpEx	\$1,057	\$1,228	\$1,450	16%	18%
Op Profit	\$2,430	\$3,552	\$4,828	46%	36%
%	46%	52%	56%	6 ppt	4 ppt

Play is very large and growing at healthy rates

- Attributable to healthy Apps business and launch & scaling of Ads business

Highly profitable and consistently improving margins

- Efficiencies in transaction costs and growth of ~100% gross margin based Ads revenue

Goals for today:

- + Form common understanding of recent changes in competitive landscape and how they impact the risks and opportunities for Play
- + Share strategies that Play leadership is pursuing and discuss how leveraging x-PA collaboration may contribute to enhanced solves and success of potential investment strategies

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EXHIBIT 434.R-002

Play Revenue Overview - Mix changing but still weighted to Apps

Total 2018 Revenue of \$8.7B, growing 26% y/y

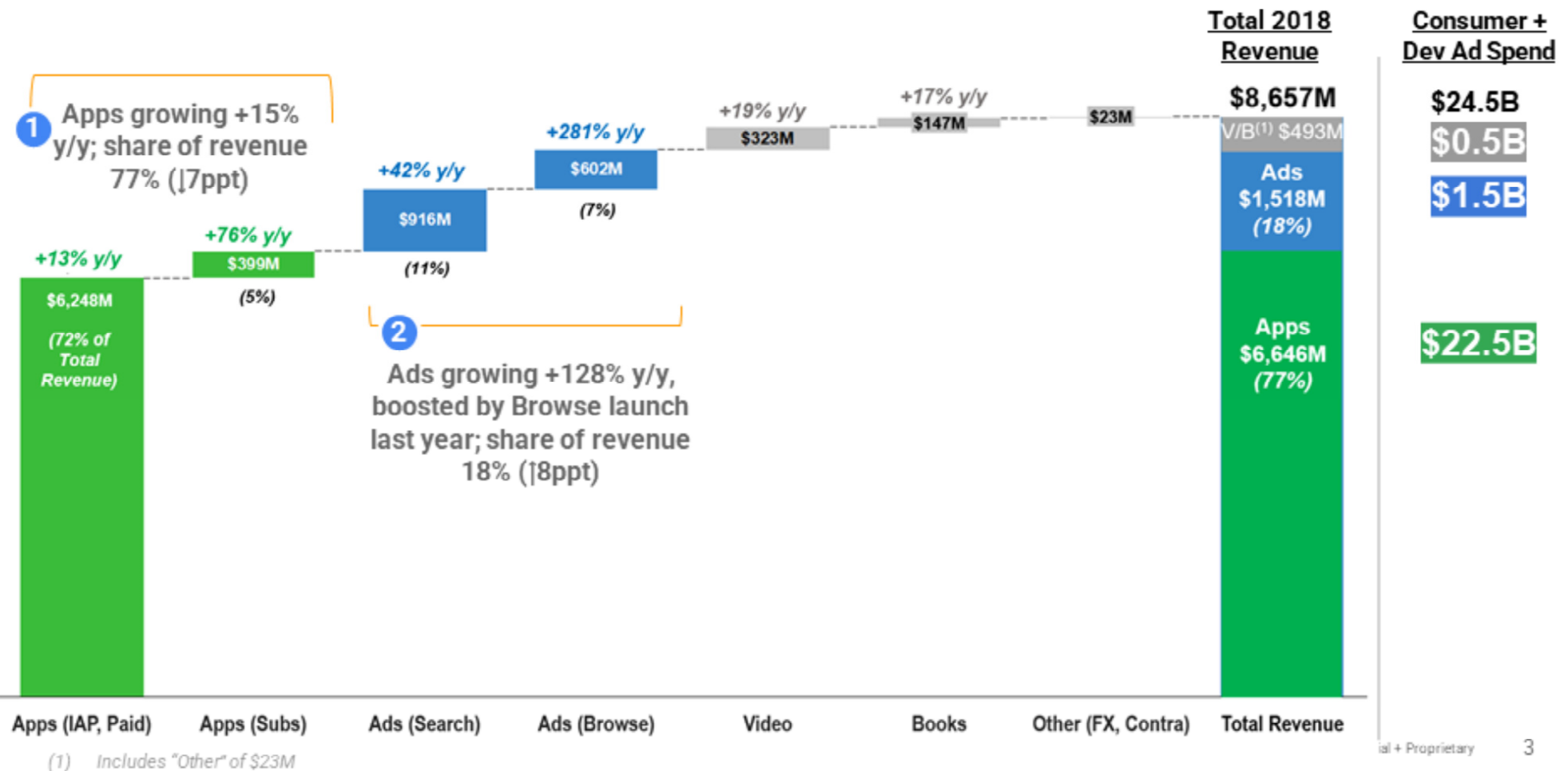


EXHIBIT 434.R-003

Play revenue heavily concentrated across biz models, geos, users & devs

Making business particularly vulnerable to advances by other players in ecosystem

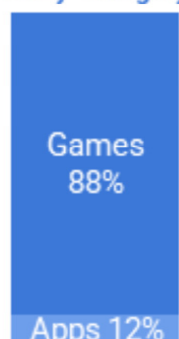
Play Apps & Video/Books Revenue

APPS & GAMES 94%

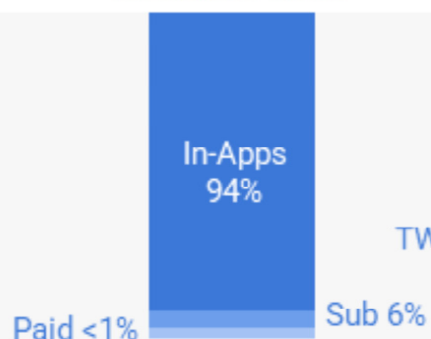
V/B 6%

Primary Area of Concentration

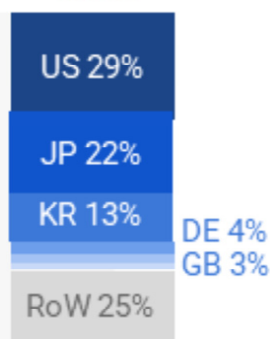
A. By Category



B. Business Model



C. Geo

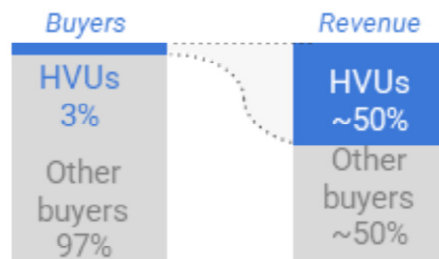


Percentages based on Q2'18 revenue

D. Developers



E. Buyers



Revenue

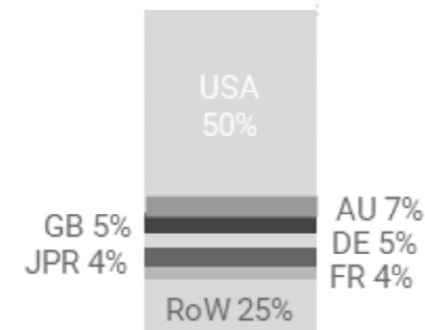


Vertical



Percentages based on Q2'18 revenue

Geo



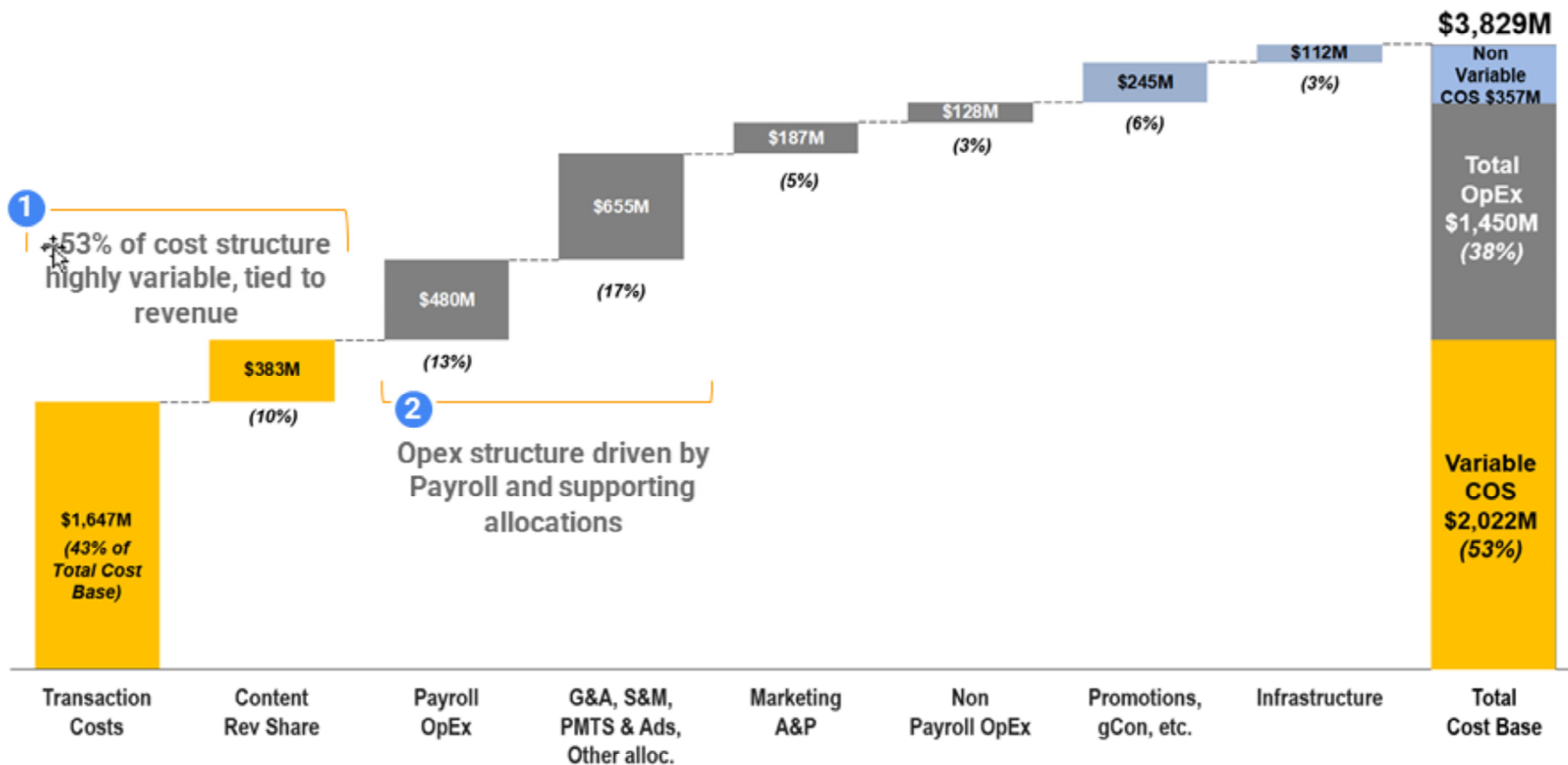
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Play Cost Base - Weighted towards variable structure

Total 2018 Cost Base of \$3.8B, growing 17% y/y



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- Transaction cost reductions over years & Payroll to revenue growth ratio
- If interest in doing a deep dive in cost structure then happy to take a follow on

- [Link](#) to detailed breakdown appendix slide
- [Link](#) to Trix

•

Marketing A&P \$188

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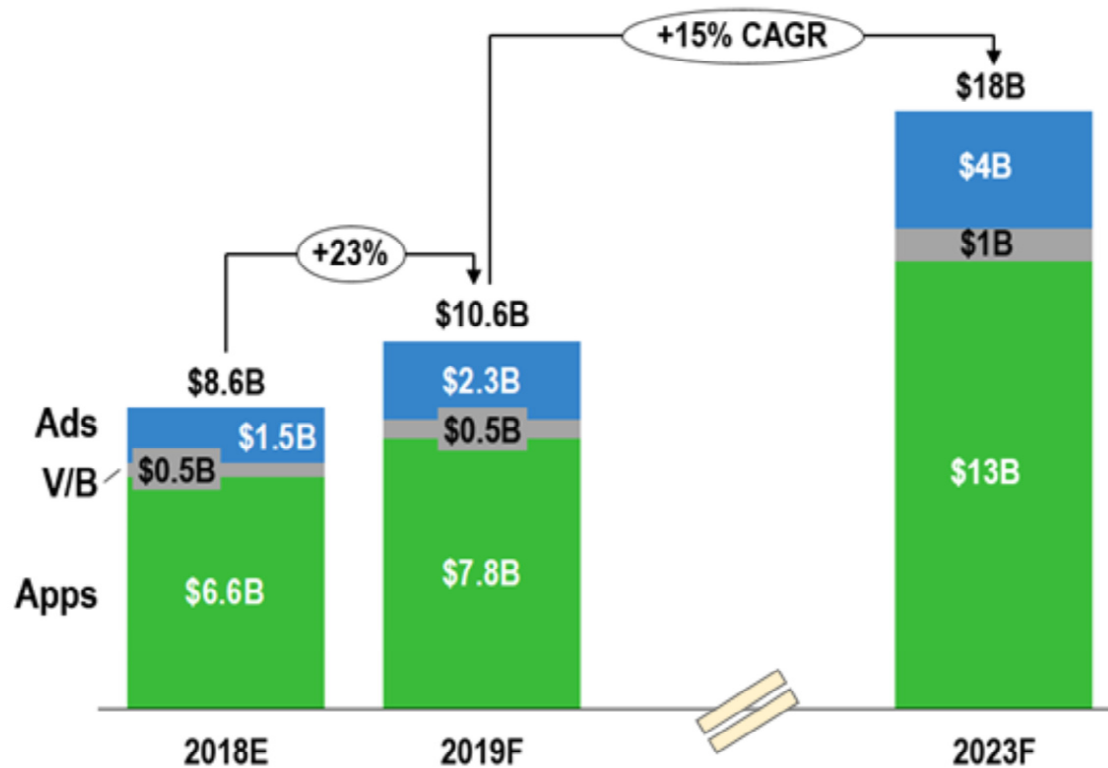
EXHIBIT 434.R-005

GOOG-PLAY-000445447.R

- G&A Allocation Breakdown: \$280
- REWs: \$121M; Finance: \$63; Legal: \$45; POps: \$24; Central: \$23; Public Relations: \$4
- Ads & Commerce
- Sales & Marketing Allocation Breakdown: \$203M
- Marketing \$19M (55HC)
- GBO \$82M (258 HC) -- gCon, Ingestion for content, Partnerships (Books)
- Non-Cash House Ads \$102M
- TI Allocations \$88M Operating Expenses from two types of costs (Original TI Costs & Inherited (Rews, Pops, etc); costs come from five different TI costs pools
- Resource Economy - C&S (Allocation method: Usage of server resources multiplied by unit prices)
- Resource Economy - Networking (Allocation Method: Actual cost multiplied by each product areas (PA's) share of throughput)
- Resource Economy - Other (overhead activities, such as: SRE support, Corp Fleet resources (InSIDE), TI C&S and networking cost) Allocated proportionally to each PA's Compute & Storage charges.
- Corp Eng- Direct Allocation for PA Specific; For general services, proportional to headcount within PA or number of hardware devices
- Privacy and Security- Proportional to headcount within PA
- Other COS: Localization, Amort of Intangible Assets

EXHIBIT 434.R-006

Long Term Play revenue outlook - Line of sight to \$18B if we mitigate ecosystem risks & continue to invest in new opportunities



Path to \$18B - Agenda for today

1. Protect User Trust & Safety & Play/Google reputation
2. Enhance Developer ties & value proposition
3. Transform User relationship
4. Leverage X-Google assets

+ Initiatives not discussed today:

- Product innovation (e.g high fidelity gaming solves which are key)
- Diversify revenue streams
- Emerging markets
- FOP expansion
- Ads
- Media & Entertainment

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*2018 Plan Fixed FX rates (Core performance revenue only)

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EXHIBIT 434.R-007

1. Protect User Trust & Safety and Play/Google Reputation

With ~4.3M Apps on Play & ~65K submissions everyday, trust and safety is an ongoing & evolving challenge

Reputation and User Risk (examples)

“Thousands of Android apps potentially violate child protection law”

-- [The Guardian](#)

“Pornographic malware found in Android apps for kids”

-- [CNN Tech](#)



Elsagate
(kids)



Fake Whatsapp
(impersonation)



Adultswine
(kids + ads + copycat)

Google

Play Initiatives

- **Respond:** Declared “Code Yellow” in Q1 → removed 1.7M non-compliant apps (150k bad kids apps) & 5k devs
- **Actively investing:** Ramping ~300 TVCs (\$19M in ‘18)
- **High priority area needing further attention & investment**

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- [Link](#) to original slide
- Respond: Declared Code Yellow in Q1 → removed 1.7M non-compliant apps
- Exited Code Yellow in early Q3 by reducing Brandspam abuse by 90%
- Investments to Monitor: On track to ramp ~ 300 TVCs to expand thorough kids app reviews (\$19M in ‘18 investment)
- Expect need for additional investments, likely in form of HC:
- Hired a seasoned engineering executive with relevant background to build a dedicated engineer team on user safety & trust
- Planning to revamp ML-based Classifiers and forming an “intelligence desk” to proactively counter rising threats
- Operation is in-bound based
- Brandspam: use of brands to generate install, the app is non-compliant (e.g. violent content)
- Response: offensive approach to attack the problem. Monitor: Defensive approach
- Store is a different place, looks a different now.

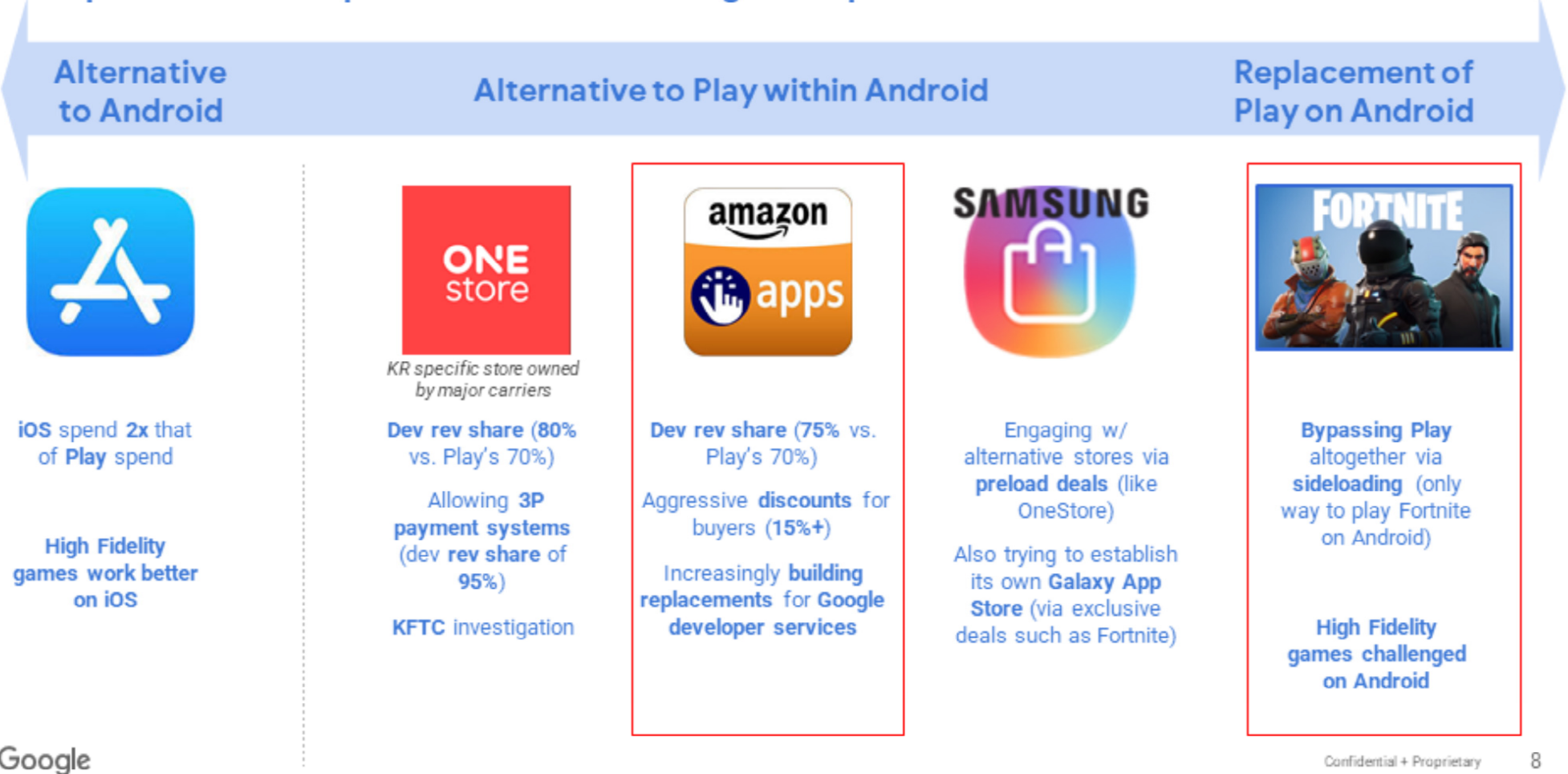
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2. Enhance Developer Ties & Value Proposition

Competitive landscape: Pressures increasing & complex to address



Ex. 1 - User Risk: AMZN: \$1B long-term exposure

Short-term threat of \$100M-\$350M



AMZN offering compelling incentives to:

Developers



**Preferential dev rev share
(75% vs. Play's 70%)**

Users

50,000 Amazon Coins

★★★★☆ 19,122 customer reviews

List Price: \$500.00

Price: **\$400.00**

You Save: **\$100.00 (20%)**

Denomination: 50000

300

500

1000

2500

5000

10000

50000



• Save up to 20% when you buy Amazon Coins

Potential Impact

	% of HVU's Convert to AMZN	ST Risk	LT Risk	
		(1) High Risk Titles (25 of Top 100 Globally)	(2) Titles in 1 + Top 10 (local)	(3) Top 100 Titles
15%		A \$100M Rev	\$200M	\$300M
30%		\$200M	\$350M	\$550M
50%		\$350M	\$600M	B \$950M

*JP represents ~50% of total global risk, due to high degree of HVU & Top Title concentration there)

- Speaker notes:
- 15% of [JP](#) / [Global](#) (ex. JP) HVUs = 42K / 19K
- 50% of JP / Global (ex. JP) HVU's = 347K / 342K
- How many developers does top 100 titles JP / globally (ex. JP) cover? 57 / 78 [link](#)

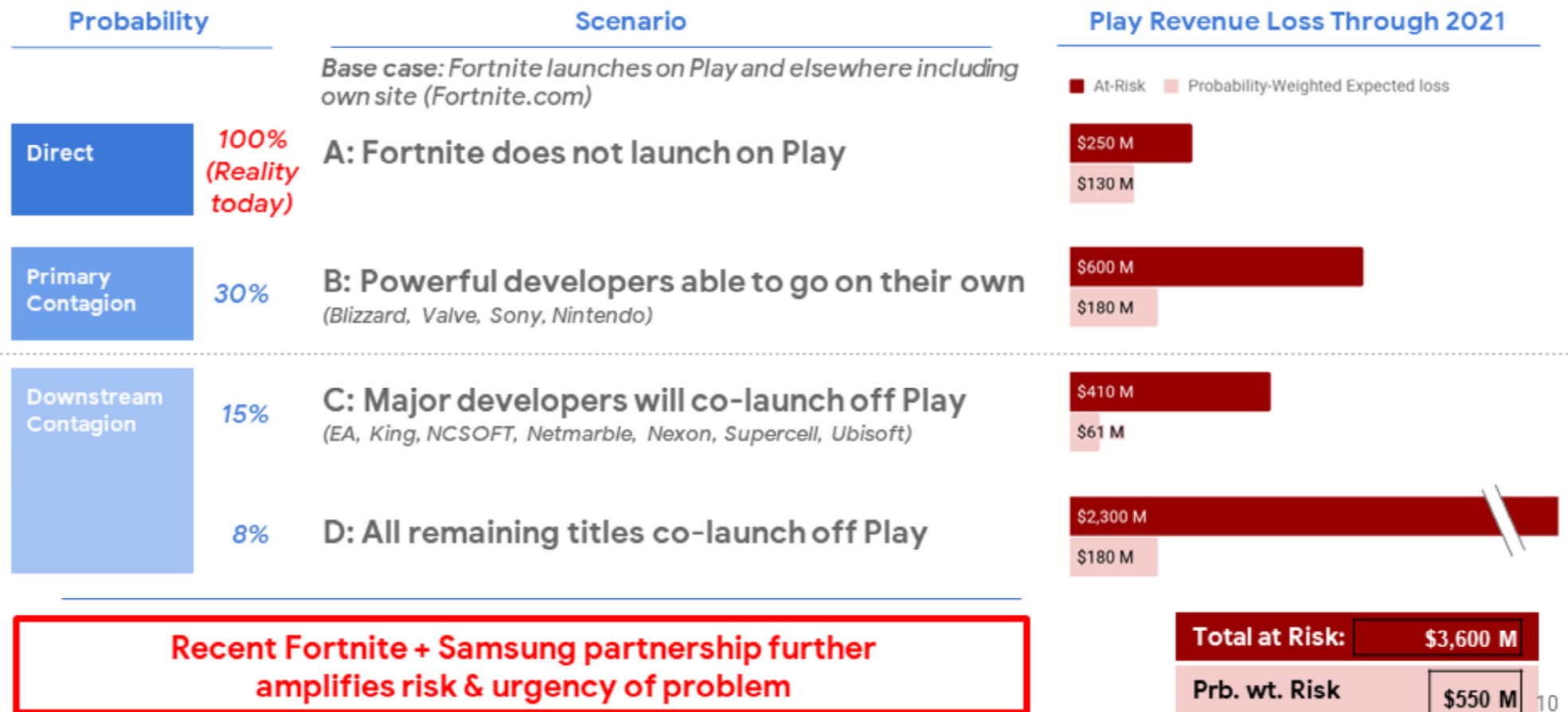
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Ex. 2 - Dev Risk: Potential implications of Fortnite not launching on Play?

Direct impact and contagion risk could decrease revenue by \$550M+ through 2021



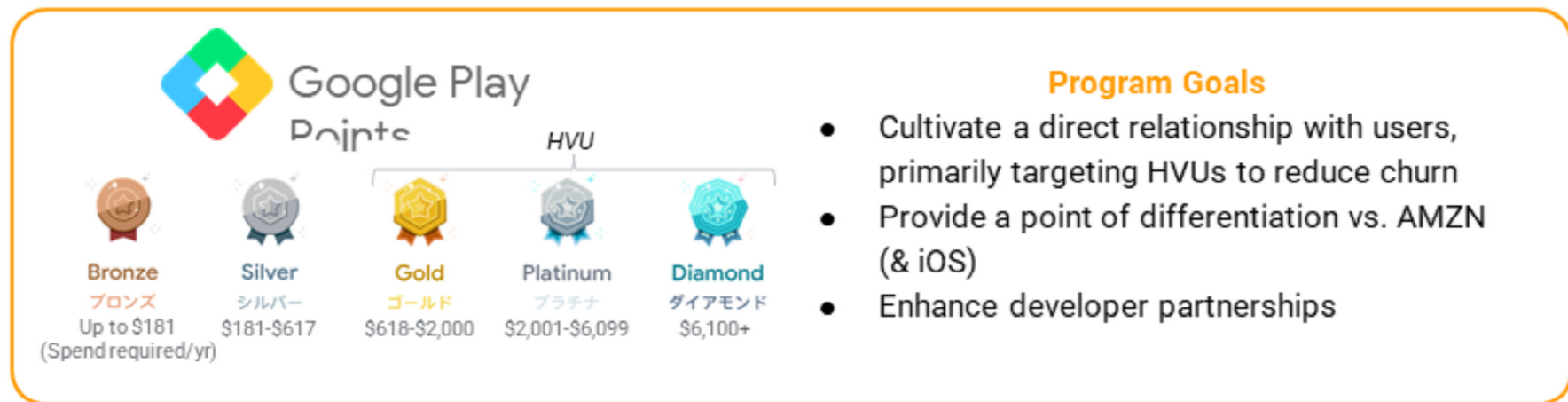
- Don't have to stretch very far to get to the 550M
- Put a caveat on the probability (indicate that it's conservative in voice over)
- In addition to these scenarios, users could switch to iPhone resulting in further substantial downsides
- Probabilities given that Fortnite does not launch on Play. \$s rounded to 2 significant figures. Totals may not equal sum of rounded numbers.
- Source: Play FP&A. Sheet.

EXHIBIT 434.R-011

3. What are we doing to transform user relationships? → “Play Points” loyalty program (launched in JP only)

Objective: Improve HVU retention by deepening our relationship w/ users via a rewards platform

Problem statement: Play HVUs in Japan are only **6.5% of buyers**, but comprise **70% of revenue**. Significant loss risk from **16% annual HVU buyer churn** (~\$200M revenue / yr)



Expected Impact: **5% HVU churn reduction** (~\$100M+ in annual revenue) and a strong defensive value by establishing a relationship with users who represent **\$2B+ in revenue in 5 potential mkts**

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- Launch developers cover 50% of JP HVU spend
- Very targeted investment (85% of cost is going towards HVUs)
- 5% churn is reducing 5% churn of the joined members. Concurrently the stretch goal is to have 70% of HVUs join. So combined the goal would be 3.5% (5% x 70%) reduction from the 16%, from 16% to 12.5%. We split up the goals since 2-3 years later HVU trends may be different.
- \$100M in revenue for HVU churn reduction only applies to all countries (JP, KR, US, TW HK) assuming the same 5% churn reduction of 70% joined HVUs in a steady annualized run rate.

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- 2.6B in revenue that is covered under this program in 2020 if the team launches in JP,KR,US,TW,HK, and enrollees represent 45% of total revenue, providing defensive value against competitive platforms
- High revenue concentration among our top developers has created an environment ripe for disruption. Competitive Android stores like OneStore and Amazon have reached 2-10% of developer revenue, mainly by attracting Play HVUs with discounts
- Launch timing: JP (9/22), KR (Q2'19), US (Q4'19)
- Mechanics: Users (1) earn points for every Play purchase and/or for installing select apps and (2) use points on Play credit, discounted IAP, game credits and exclusive in-game items
- User benefit: Total giveback to users starting at 3% (for Bronze level), with HVUs receiving 6-8+% (higher giveback than most programs for CCs, airlines, shopping, partially made possible by devs funding IAP discounts and credits)
- JP launch collaboration with JP Pixel launch (Gold status w/ purchase + 1,000 points)
- GPP success metrics:
https://docs.google.com/presentation/d/19UH94o1rzqjl_ircgKbc4NanmVTQsoxI8QkRd7AB4ks/edit#slide=id.g41250be554_0_0
- Finance Review:
https://docs.google.com/presentation/d/15fakqGTuf6Z6yQDaDbEWptT8ZwPKpn7OtHgTqREHrrk/edit#slide=id.g3ece8e49e0_0_10
- Older PPS from Jan (don't use only if you need it!):
https://docs.google.com/presentation/d/10fvW_6dO0duOcSVAehbl4P1sUYIW1HVTxnusvl-ZTUY/edit#slide=id.g2d27bc6192_0_15

EXHIBIT 434.R-013

4. Leverage x-Google Assets → Cloud/Play Dev Pilot

Problem statement:

Game devs do not meaningfully spend on GCP today

\$2.1B



Other

Niantic = \$23M

GCP = \$70M

**Estimated Annual Cloud Spend
by Play Game Developers**

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Pilot Design

- 1 Devs prioritize Play as distribution point on Android
- 2 Devs adopt GCP
- 3 Create foundation for broader dev loyalty offer x-Google

Terms

Dev receives up to 2% of Play spend as a GCP credit



Progress to Date

- ✓ Pilot launched May'18
- ✓ Just concluded first wave of developer outreach. Key wins include:



PEARLABYSS

- ✓ Gaining traction with:



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- [Link](#) to original slide
- Terms: Dev receives up to 2% of Play spend as a GCP credit
- Credits capped to \$50K per month. If dev eligible for >\$50K monthly credit, and wants to unlock full 2% credit, dev must agree to contract
- Duration: 9 months (Based on pilot results, program may be extended)
- # of Devs: targeting 30-50
- Geography: All geos, excluding Canada, Brazil, and India
- Budget: \$10M (funded by GCP)

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4. Opportunity to leverage x-Google assets

Becoming increasingly critical to harness full value of x-Google offerings to developers



- Google [Analytics](#) is separate from Cloud/Firebase. There is a distinct [Google Analytics for Firebase](#) within the Google Analytics umbrella, however.

EXHIBIT 434.R-015



Project Bear Hug - Early stage initiative and investment thesis on how best to leverage x-Google assets



Goal: Improve outcomes for developers by strengthening the Google value proposition, reducing their appetite to look elsewhere while continuing to invest in product development.

- + **P&E/Play Leadership Sponsored**
- + **X-PA engagement initiated**

More to come...

Discussion

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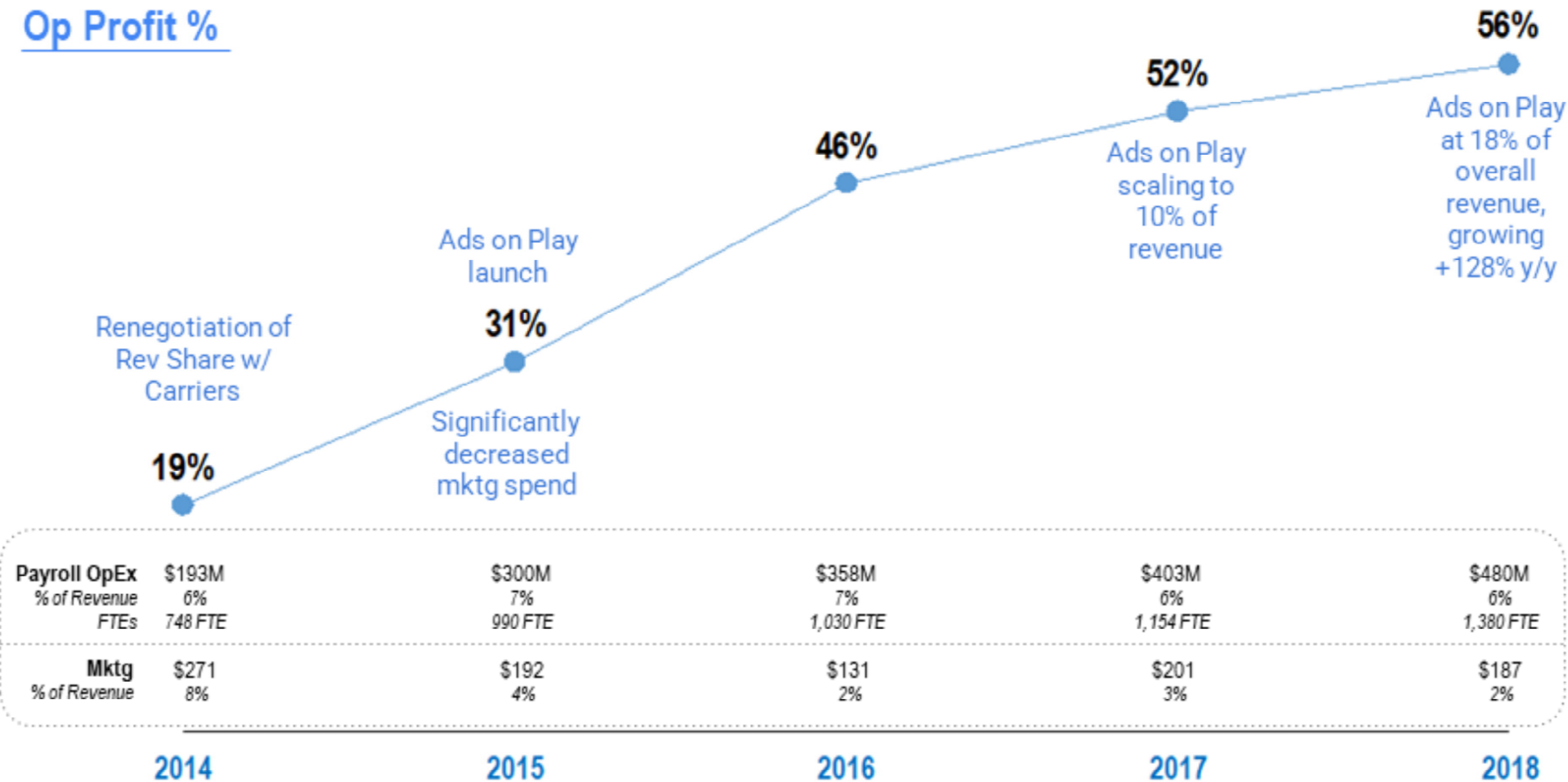
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Play Profitability & Investments

Op Profit %



Payroll OpEx	\$193M	\$300M	\$358M	\$403M	\$480M
% of Revenue	6%	7%	7%	6%	6%
FTEs	748 FTE	990 FTE	1,030 FTE	1,154 FTE	1,380 FTE
Mktg	\$271	\$192	\$131	\$201	\$187
% of Revenue	8%	4%	2%	3%	2%
	2014	2015	2016	2017	2018

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- 2014 & 2015 includes Music; 2016-2018 excludes Music
- Estimated Op Profit for 2014 if excluding Music = ~23%

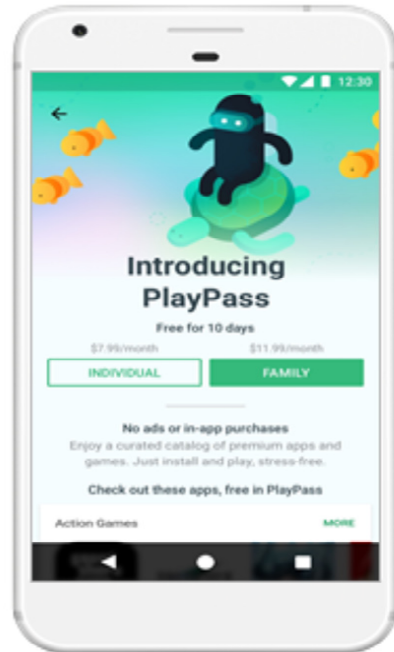
EXHIBIT 434.R-019

What are we doing to diversify the buyer base? → Play Pass

Objective: Activate more recurring buyers by delivering users the best of Play via 1P subscription of apps

Play Pass Subscription Apps Offering

- + **First of kind 1P** subscription bundle offering by Google
- + Access to **hundreds of apps & games** for flat monthly charge
- + **No Ads or IAPs**



Play Pass Goals



- + New recurring revenue stream for developers
- + Capitalize on 50M subscriber market opportunity
- + Sticky, direct relationships with paying users
- + Diversified revenue growth
- + Opportunities for stronger partnerships w/ OEMs and Carriers

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- Launch US Q2'19
- Acquire 17M subscribers and be margin positive by year 5
- ~\$150M - \$400M in revenue by year 5
- New recurring revenue stream for developers
- Google drives buyer acquisition, so developers can focus on creating engaging experiences
- Sticky, direct relationships with paying users
- Aggregation of curated content from across Play attracts both individuals and families to buy into the ecosystem
- Diversified revenue growth
- More paying users and successful developers reduce reliance on handful of HVUs and titles
- Opportunities for stronger partnerships
- Differentiated offering helps carriers and OEMs retain existing users and attract underserved user segments

EXHIBIT 434.R-020

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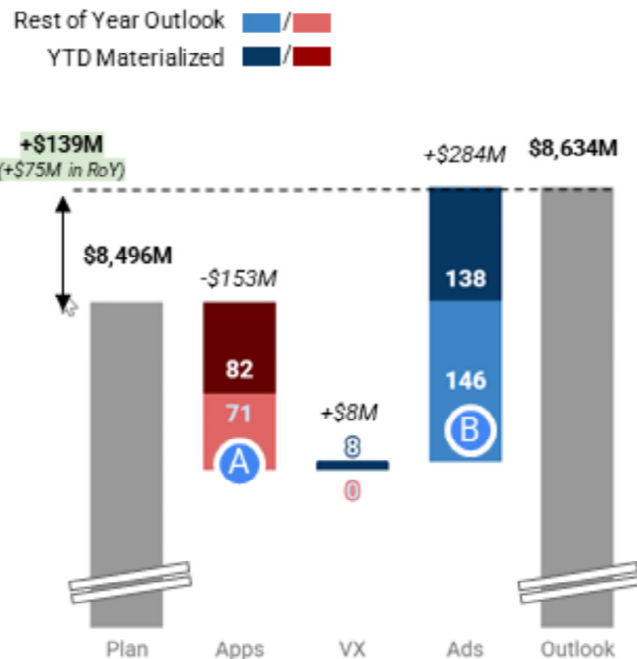
2018 charting to \$8.6B, +2% (\$139M) above Plan

Overperformance in Ads (+\$284M) offset by weakness in Apps (-\$153M)

2018 Plan vs. Outlook

	FY18		
	\$M	vs. Plan	Y/Y
Total Play	8,634	2%	26%
Apps	6,646	-2%	15%
IAP + Paid DL	6,248	-3%	13%
Apps Subs	399	10%	76%
Video	323	2%	19%
Books	147	0%	17%
Ads on Play	1,518	23%	128%
Browse Ads	916	37%	
Search Ads	602	6%	42%

2018 Drivers of Performance & Rest of Year Dependencies



A Apps expected to continue YTD trajectory in RoY (-\$71M vs. Plan)
Need US strength to hold in order to partially offset expected gaps in RoW (particularly in JP)

B Revenue upside to continue to come from Ads in RoY (+\$146M vs. Plan)
Expected to end year with \$1.7B ARR

Strong growth and performance primarily driven by significant inventory launches

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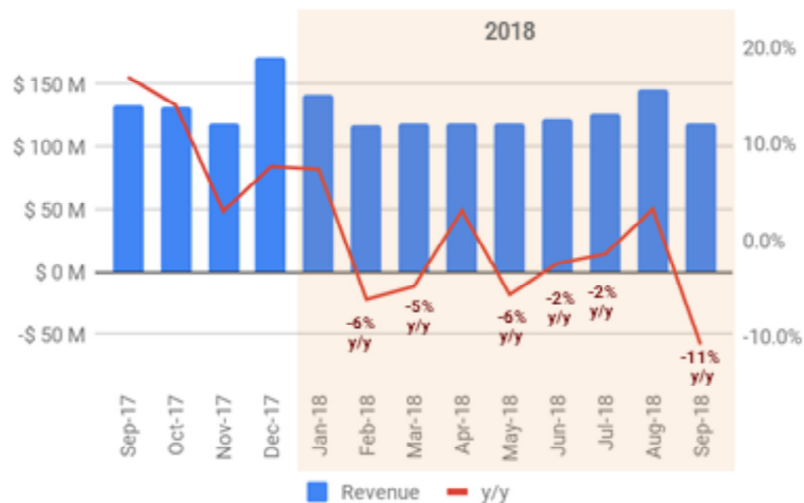
- Outlook as of v8; YTD thru Jul Actuals, RoY = Aug-Dec; [link](#) to waterfall

EXHIBIT 434.R-021

Top Market: Japan Apps challenged at -2% YTD growth y/y¹

Japan Apps Revenue

Q3 Continues to Shrink y/y



Buyers/Spend per Buyer



-1% y/y (New buyers -21% y/y): new-to-Androids and past buyers not engaging or converting like historical levels.

Developers



Y/Y growth slowing from top titles Fate Grand Order & Monster Strike (10% of rev each).
Not enough new or import titles to replace top-title drops.

Android



Play revenue has been stable to improving at 83% of iOS YTD. (AppAnnie source)

¹ Data through Sep'18 fcst.

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EXHIBIT 434.R-022

Play P&L Overview

	2017	2018			
	Actuals	Outlook	Plan	Δ v. Plan	Y/Y%
<i>in USD (\$M)</i>					
Total Revenue	\$6,853 M	\$8,657 M	\$8,445 M	\$212 M	26%
Core Perf. (in Fixed FX)	\$6,835 M	\$8,637 M	\$8,498 M	\$139 M	26%
Apps	\$5,769 M	\$6,646 M	\$6,799 M	(\$153 M)	15%
V/X	\$401 M	\$472 M	\$464 M	\$8 M	18%
Ads	\$664 M	\$1,518 M	\$1,235 M	\$284 M	128%
Other/Contra Rev	\$40 M	(\$38 M)	(\$53 M)	\$15 M	(194%)
FX Adj.	(\$22 M)	\$59 M	\$ -	\$59 M	n/m
Direct COS (ex. Infra)	\$1,947 M	\$2,267 M	\$2,474 M	(\$207 M)	16%
Infrastructure	\$80 M	\$112 M	\$99 M	\$13 M	39%
Gross Profit	\$4,825 M	\$6,278 M	\$5,872 M	\$406 M	30%
%	70%	73%	70%	3% ppt	2% ppt
Total OpEx	\$1,273 M	\$1,450 M	\$1,437 M	\$13 M	14%
Direct OpEx	\$573 M	\$608 M	\$621 M	(\$14 M)	6%
Other EngPM ⁽¹⁾	\$17 M	\$81 M	\$83 M	(\$2 M)	370%
Marketing A&P	\$201 M	\$187 M	\$184 M	\$4 M	(7%)
Sales & Marketing (ex. A&P)	\$170 M	\$203 M	\$200 M	\$3 M	20%
G&A Allocations	\$241 M	\$282 M	\$260 M	\$21 M	17%
TI Allocations	\$71 M	\$89 M	\$88 M	\$1 M	25%
Op Profit	\$3,552 M	\$4,828 M	\$4,435 M	\$393 M	36%
%	52%	56%	53%	3% ppt	4% ppt

- Revenue charting to \$8.7B in 2018, growing 26% y/y**
 - Ads accounting for 18% of revenue (up from 10% in 2017),
 - Revenue represents total consumer & developer ad spend of \$25B being spent on Play.
- Gross profit of \$6.3B (73% of revenue), +2ppt improvement vs. 2017**
 - Driven by efficiencies in transaction costs and growth of 100% gross margin based Ads revenue
- Op Profit of \$4.8B, growing 36% y/y**
 - Driven by gross profit gains above and modest (direct opex + marketing A&P) to in-line growth with revenue (allocations) of OpEx

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Note (1) Other EngPM growth of 370% y/y, due to 2018 being first full year of allocations from Ads & Commerce PA

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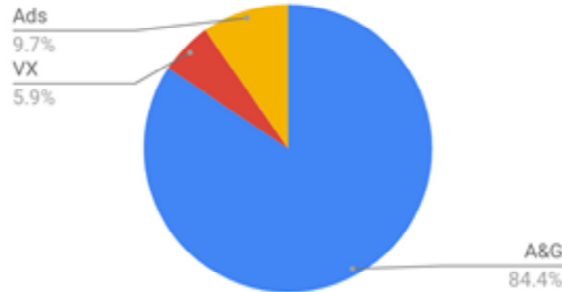
- V8 Outlook

EXHIBIT 434.R-023

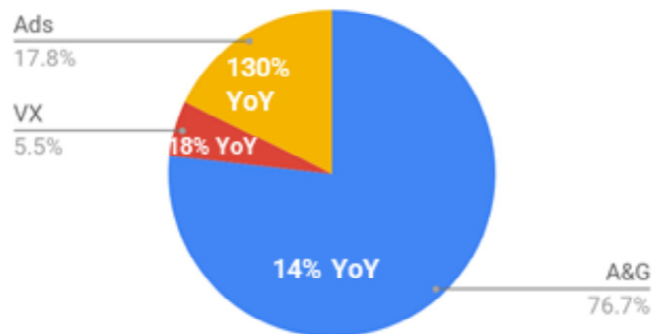
Play Revenue & Cost Overview

Revenue Dynamic

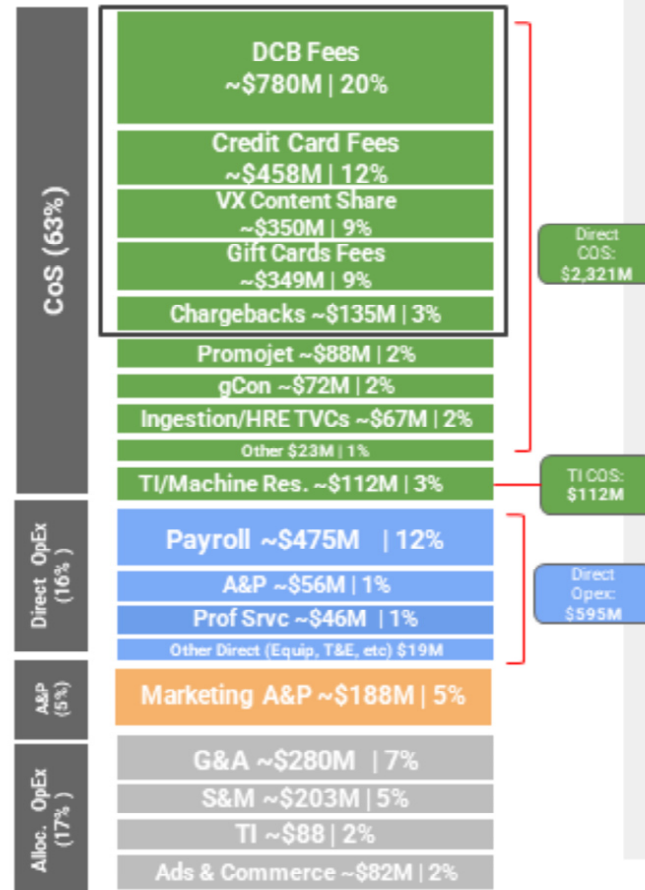
2017: Total Play Revenue \$6.8B



2018: Expect Total Play Revenue of \$8.6B



Cost Base: ~ \$3,870M (17% YoY)



%s reflect % of total cost base

- Play revenue is expected to grow 26% in 2018 to be ~ **\$9B** business
 - Ads increasing mix of total revenue growing **130% YoY**
- Cost base of ~ \$4B heavily weighted towards Cost of Sales (~65%)
 - Close to 55% of our cost structure is highly variable, limiting the opportunity to realize further operational leverage if Ads slow

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- FY 2017 Actuals vs. FY 2018 Projection (v6) [link to trix](#)
- G&A Allocation Breakdown: \$280
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- Marketing A&P \$188
- Sales & Marketing Allocation Breakdown: \$203M
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EXHIBIT 434.R-024

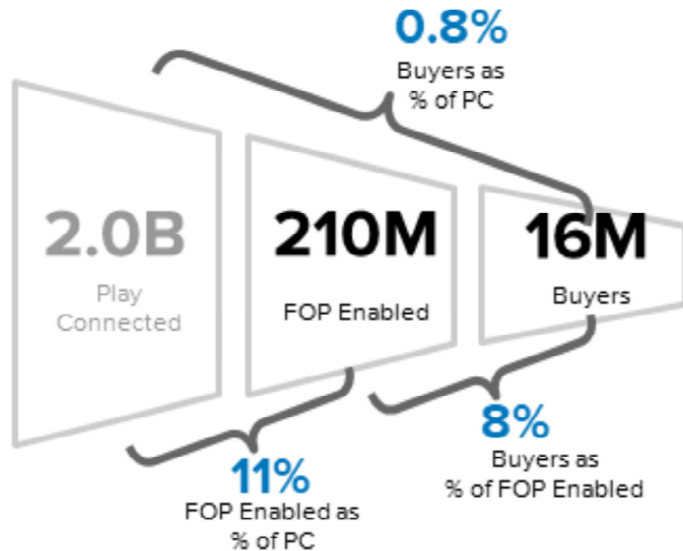
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- Corp Eng- Direct Allocation for PA Specific; For general services, proportional to headcount within PA or number of hardware devices
- Privacy and Security- Proportional to headcount within PA
- Other COS: Localization, Amort of Intangible Assets, Latchsky placeholder, etc

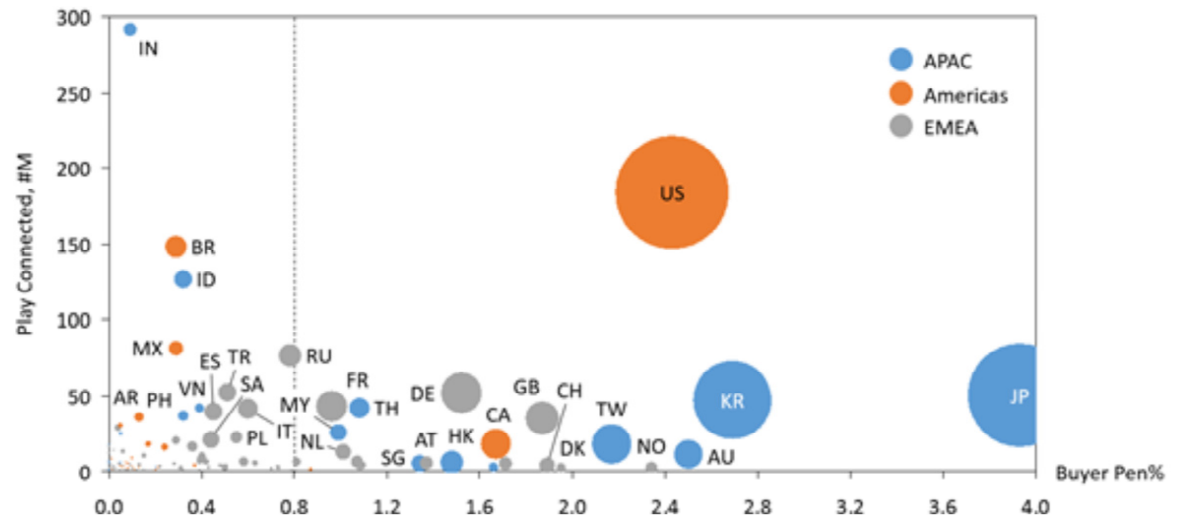
EXHIBIT 434.R-025

FOP launches key to expanding Play's buyer footprint

11% of PC are FOP Enabled; 0.8% are Buyers



Spend Concentration in top 5 markets; High Play Connected & low Buyer% signal key opportunity areas



- FOP launches enable Android users across the world to transact on our platform
- High Spend & Buyer Concentration : Top 5 countries represent 56% of Play buyers & 88% of Spend
 - Unlocking countries with high Play Connected & low buyer penetration key to revenue diversification & growth
 - Additional factors include country's propensity for gaming/digital consumption, android adoption growth etc
 - Need for locally relevant FOPs given geo differences in payment preferences, shifting/evolving digital payments landscape

Note: Play Revenue funnel based on 7 DA view

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- Key message for this slide:
- Purpose of FOP launches: FOP launches enable Android users to transact on Play Platform.
- Country's FOP opportunity signaled by high Play Connected and low FOP connected/ buyer penetration.
- Geo differences in payment preferences, shifting/evolving digital payments landscape
- Key emerging market priorities require concurrent commerce platform development & Play store content/demand creation

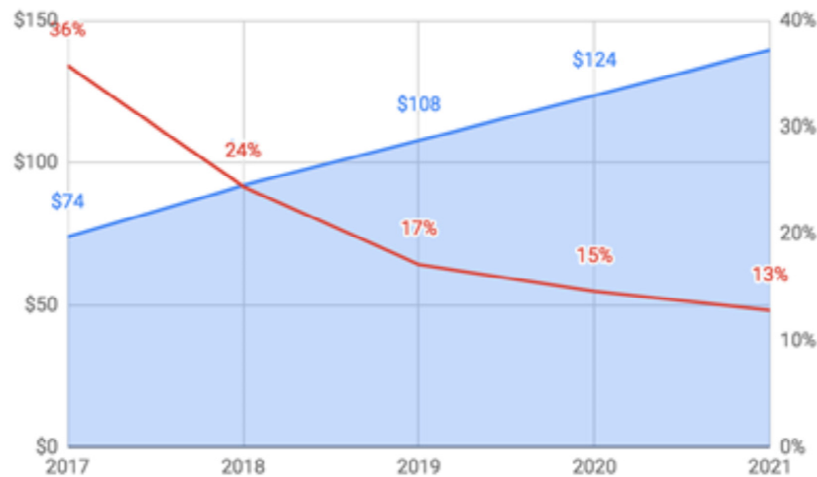
EXHIBIT 434.R-026

Market sizing of Apps consumer spend based on external data

Major agencies forecast slowdown across platforms

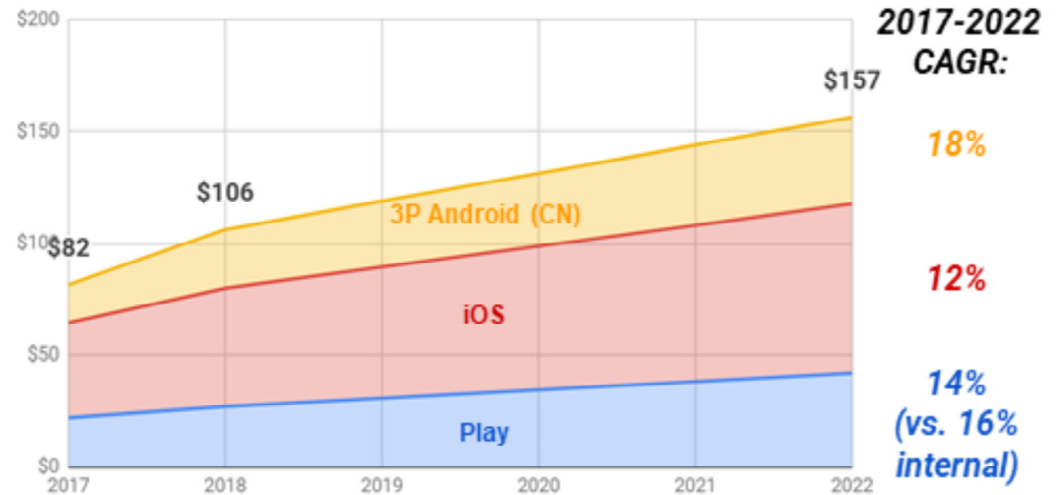
Newzoo: Play and iOS Spend (\$B)

Projecting deceleration to 13% y/y in 2023



AppAnnie: Play, iOS & 3P Android Spend (\$B)

Deceleration across Platforms



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